

Machine Id 15393 Compone **Diesel Engine** EXXON 15W40 (--- GAL)

RECOMMENDATION Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0933282		
	Sample Date		Client Info		04 Jun 2024		
	Machine Age	mls	Client Info		9783		
	Oil Age	mls	Client Info		9783		
	Filter Age	mls	Client Info		9783		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ATTENTION		
WEAR Metal levels are typical for a new component breaking in.	Iron	ppm	ASTM D5185m	>100	16		
	Chromium	ppm	ASTM D5185m	>20	0		
	Nickel	ppm	ASTM D5185m	>4	0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>3	0		
	Aluminum	ppm	ASTM D5185m	>20	25		
	Lead	ppm	ASTM D5185m	>40	<1		
	Copper	ppm	ASTM D5185m	>330	8		
	Tin	ppm	ASTM D5185m	>15	2		
	Vanadium	ppm	ASTM D5185m		<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m		39		
	Potassium	ppm	ASTM D5185m	>20	68		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in	Potassium Fuel		ASTM D5185m ASTM D3524	>20 >5	68 0.3		
	Potassium Fuel Water	ppm	ASTM D5185m ASTM D3524 WC Method	>20 >5	68 0.3 NEG		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the	Potassium Fuel Water Glycol	ppm %	ASTM D5185m ASTM D3524 WC Method WC Method	>20 >5 >0.2	68 0.3 NEG NEG		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot %	ppm %	ASTM D5185m ASTM D3524 WC Method WC Method *ASTM D7844	>20 >5 >0.2 >3	68 0.3 NEG NEG 0.2	 	
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration	ppm % % Abs/cm	ASTM D5185m ASTM D3524 WC Method WC Method *ASTM D7844 *ASTM D7624	>20 >5 >0.2 >3 >20	68 0.3 NEG NEG 0.2 6.6	 	
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation	ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D3524 WC Method WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415	>20 >5 >0.2 >3 >20 >30	68 0.3 NEG NEG 0.2 6.6 23.9	 	
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt	ppm % % Abs/cm Abs/.1mm scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual	>20 >5 >0.2 >3 >20 >30 NONE	68 0.3 NEG NEG 0.2 6.6 23.9 NONE		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris	ppm % % Abs/cm Abs/cm Abs/1mm scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE	68 0.3 NEG 0.2 6.6 23.9 NONE NONE		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt	ppm % % Abs/cm Abs/cm Abs/.1mm scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance	ppm % % Abs/cm Abs/1mm scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORM	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NONE		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor	ppm % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NONE NORML NORML		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance	ppm % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *ASTM D7415 *Visual *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORM	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NONE		
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NONE NORML NORML NEG		
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NORML NORML NEG		
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm % Abs/cm Abs/1mm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NORML NORML NEG 3 296		
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar gcalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *STM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NORML NORML NEG 3 296 <1		
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. FLUID CONDITION The oil viscosity is lower than normal. The BN result indicates that	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm % Abs/cm Abs/cm scalar scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D3524 WC Method WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NORML NORML NORML NEG 3 296 <1 102		
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. FLUID CONDITION The oil viscosity is lower than normal. The BN result indicates that	Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar gcalar	ASTM D5185m ASTM D3524 WC Method *ASTM D7844 *ASTM D7624 *Visual *Visual *Visual *Visual *Visual *Visual *Visual *STM D5185m ASTM D5185m	>20 >5 >0.2 >3 >20 >30 NONE NONE NONE NORML NORML	68 0.3 NEG 0.2 6.6 23.9 NONE NONE NONE NORML NORML NEG 3 296 <1		

Calcium

Zinc

Sulfur

Oxidation

Visc @ 100°C cSt

Phosphorus

ASTM D5185m

ASTM D5185m

ASTM D445 14.4

Abs/.1mm *ASTM D7414 >25

ppm ASTM D5185m

ppm ASTM D5185m

ppm

ppm

Base Number (BN) mg KOH/g ASTM D2896

1645

787

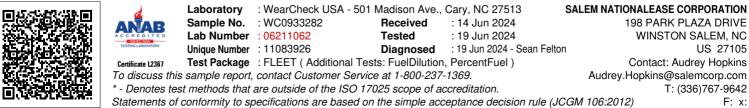
940

3109

18.8 9.1

9.7





Contact/Location: Audrey Hopkins - SALWIN Page 2 of 2